

DESCRIPTION OF A NEW IDIOCERINE GENUS *PERIACERUS*,
HEMIPTERA: CICADELLIDAE, AND TWO NEW SPECIES
FROM INDIA AND SRI LANKA¹

(With twenty-nine text-figures)

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Key words: *Periacerus* gen. nov., *Periacerus bidentatus* sp. nov., *Periacerus lankensis* sp. nov.,
India, Sri Lanka

Periacerus gen. nov. (type species: *Idioscopus lalithae* Viraktamath) is described. The new genus and the Afrotropical genus *Pandacerus* Webb share similar structure of second pair of gonapophyses including the apical hyaline region and male style. Basally constricted clypellus, longer laterofrontal sutures above antennal pit, distinct basal lobe of subgenital plate, dorso-lateral fracture of the male pygophore, in addition to closed inner and median anteapical cells of fore wing and the transversely striated upper part of face distinguish *Periacerus* from *Pandacerus*. Two new species, *Periacerus bidentatus* sp. nov. (from India: Coimbatore, Mudigere) and *Periacerus lankensis* (from Sri Lanka: Hakgala) are described and illustrated. A key to species is also provided.

INTRODUCTION

During the study of the Idiocerinae of the Indian subcontinent with a view to evaluate the taxonomic value of female characters, it became apparent that *Idioscopus lalithae* Viraktamath is misplaced in the genus *Idioscopus* Baker. Viraktamath (1979) mentioned that the species deserves the "erection of a new genus as it forms an atypical member of *Idioscopus*". Recently, a collection of leafhoppers from the Natural History Museum, London (BMNH) became available for the study. These collections included two more species closely related to *I. lalithae*, strengthening the ground for the erection of a new idiocerine genus for their reception.

Periacerus gen. nov.

Type species: *Idioscopus lalithae* Viraktamath.

Ochraceous with a dark brown to black band on posterior margin of pronotum. Vertex

without black spots. Face with or without black spots adjacent to ocelli.

Head broader than pronotum. Face including eyes wider than long. Length of inner margin of eye 0.8-0.86 perpendicular length of face below eye. Lateral frontal sutures extending beyond antennal pits to half distance between ocellus and antennal pit. Male antenna with a subapical disc. Transclypeal sulcus absent. Lateral areas of clypellus in basal 0.66 strongly depressed beyond which clypellus is widened. The ratio of maximum width of clypellus to minimum width is more than 1.5. Lora raised, their upper extremity reaching half-length of frontoclypeus. Gena below antennal pit obliquely rugose. Ratio of interocular to ocellocular is 1:2. Area of head above ocellus transversely striate. Scutellum longer than pronotum. Fore wing with four apical and three anteapical cells, the latter closed behind; outer anteapical cell 0.33-0.25 as long as median, appendix large, wider than width of any anteapical cells. Hind femoral spinulation 2+1. Hind tibial spinulation R, 20 ± 3, R2 8 ± 1, R3 9 ± 1. Hind basitarsus with three platellae on transverse row with one seta on either side.

Male eighth sternum well sclerotized with anterior pair of prominent apodemes. Ninth tergum with well-developed pair of dorsal apodemes. Anal

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collar well developed, caudally produced into a bilobed process. Tenth segment well sclerotized. Pygophore with dorsolateral fracture, 0.2 as high as long, without processes. Subgenital plate well sclerotized held vertically, broader than height of pygophore, with long hair-like marginal setae, basal segment prominent. Style elongate, preapical lobe lateral, prominent with 2-3 long setae, apophysis with expanded apical process laterally. Connective T-shaped, with well-developed dorsal keel. Aedeagus U-shaped, compressed, dorsal apodeme well developed, shaft elongate, with or without a pair of short processes, gonopore subapical on caudal margin.

Ovipositor extending well beyond pygophore. Gonocoxae I with an angular projection on ventral margin; gonapophysis I with rounded posterior basal shoulder and anterior outer shoulder; striations extending to 0.75 of length. Gonapophysis II broadest in proximal 0.33 with denticulate area saw-like, occupying 0.75 of total length; denticles prominent with an apical hyaline region.

Remarks: *Periacerus* looks similar to the Afrotropical genus *Pandacerus* Webb (1983) as both the genera share similar structure of second pair of gonapophyses including the apical hyaline region. However, basally constricted clypellus, longer latero-frontal sutures above antennal pit, distinct basal lobe of subgenital plate, dorso-lateral fracture of the male pygophore, in addition to closed inner and median anteapical cells of fore wing and the transversely striated upper part of face distinguish *Periacerus* from *Pandacerus*.

Etymology: *Periacerus* alludes to the place of collection of the type species namely Periyar Wildlife Sanctuary, "cerus" is commonly used in the generic ending of the subfamily Idiocerinae.

KEY TO SPECIES OF *PERIACERUS*

1. Face with median black stripe extending from frontoclypeus to basal half of clypellus (Fig. 9); rounded lobe of anal collar process crenulate (Fig.

13) (Sri Lanka: Hakgala) *lankensis* sp. nov.
 — Face without such a stripe (Figs 1, 22), or if present, light brown extending the entire length of frontoclypeus and clypellus with a chocolate brown spot; round lobe of anal collar process entire (India) 2
 2. Aedeagal shaft with a pair of short processes (Figs 27, 28) (India: Coonoor; Mudigere)
 *bidentatus* sp. nov.
 — Aedeagal shaft without processes (India: Thekkadi) *lalithae* Viraktamath

Periacerus lalithae (Viraktamath) comb. nov.

Figs 1-7

Idioscopus lalithae Viraktamath, 1979: 177-179, Figs 22-32. Holotype ♂, India [UAS, examined]

Viraktamath (1979) has adequately described the species. The following are the additional characters.

Female genitalia: Hind margin of seventh sternum caudally produced with a median notch. Gonocoxae and gonapophysis as in Figs 3-7.

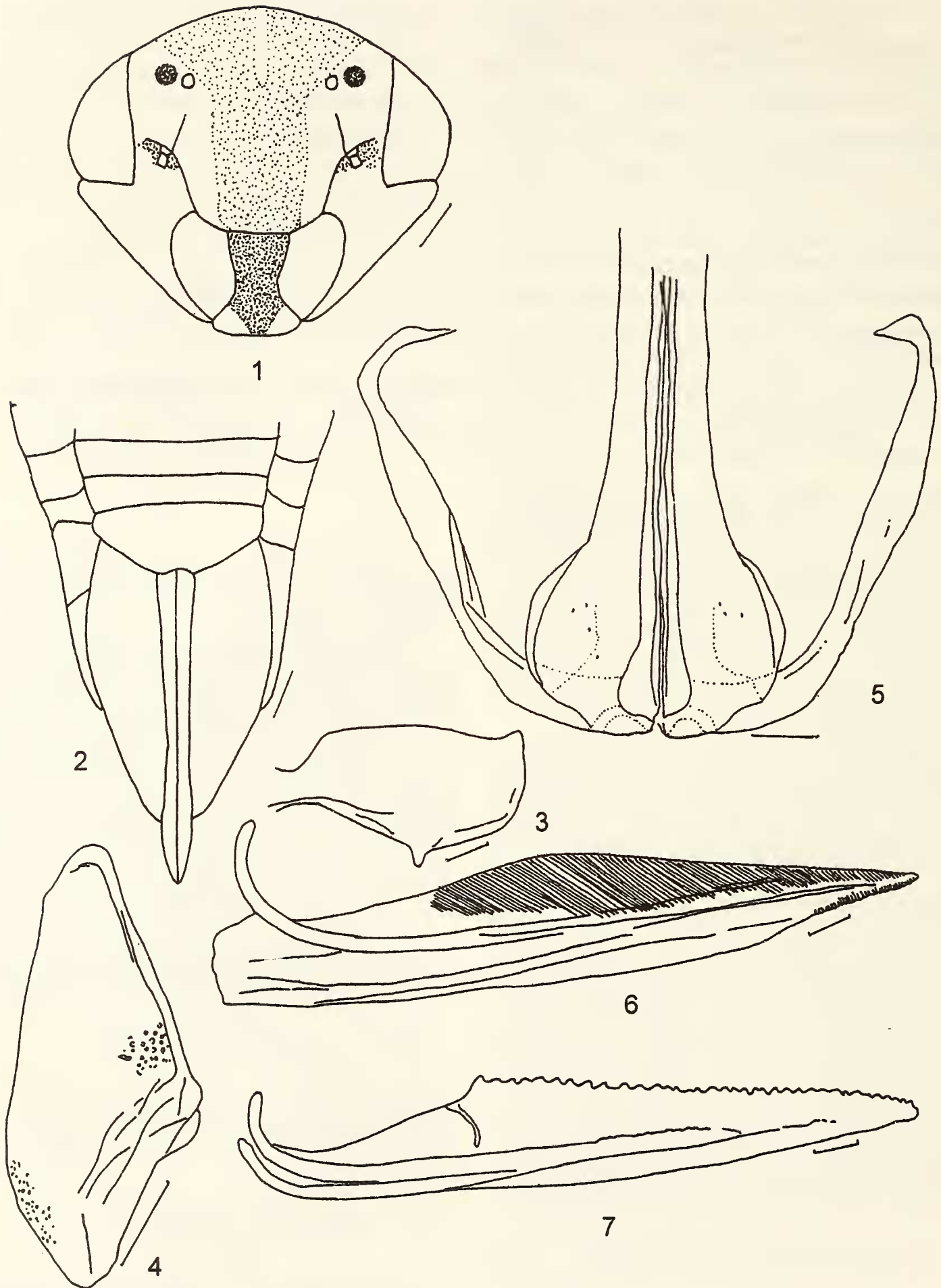
Material examined: Holotype ♂, INDIA: Kerala: Thekkadi [Periyar Wildlife Sanctuary], 26.iii.1977, C.A. Viraktamath Coll. (UAS). Paratypes 3 ♀, data as for holotype but 1 ♀ collected on 26.iii.1977 by B. Mallik, 1 ♀, collected on 27.iii.1977 by S. Viraktamath (UAS).

Remarks: It is closely related to *P. lankensis* but can be readily distinguished by the strongly apically hooked aedeagal shaft, more prominent expansion on the apophysis of style. Pronotal coloration is very variable. In darker specimens, the pronotal band is darker than in *lankensis* and in darker females the facial stripe is brownish with part of clypeus chocolate brown to black.

Periacerus lankensis sp. nov.

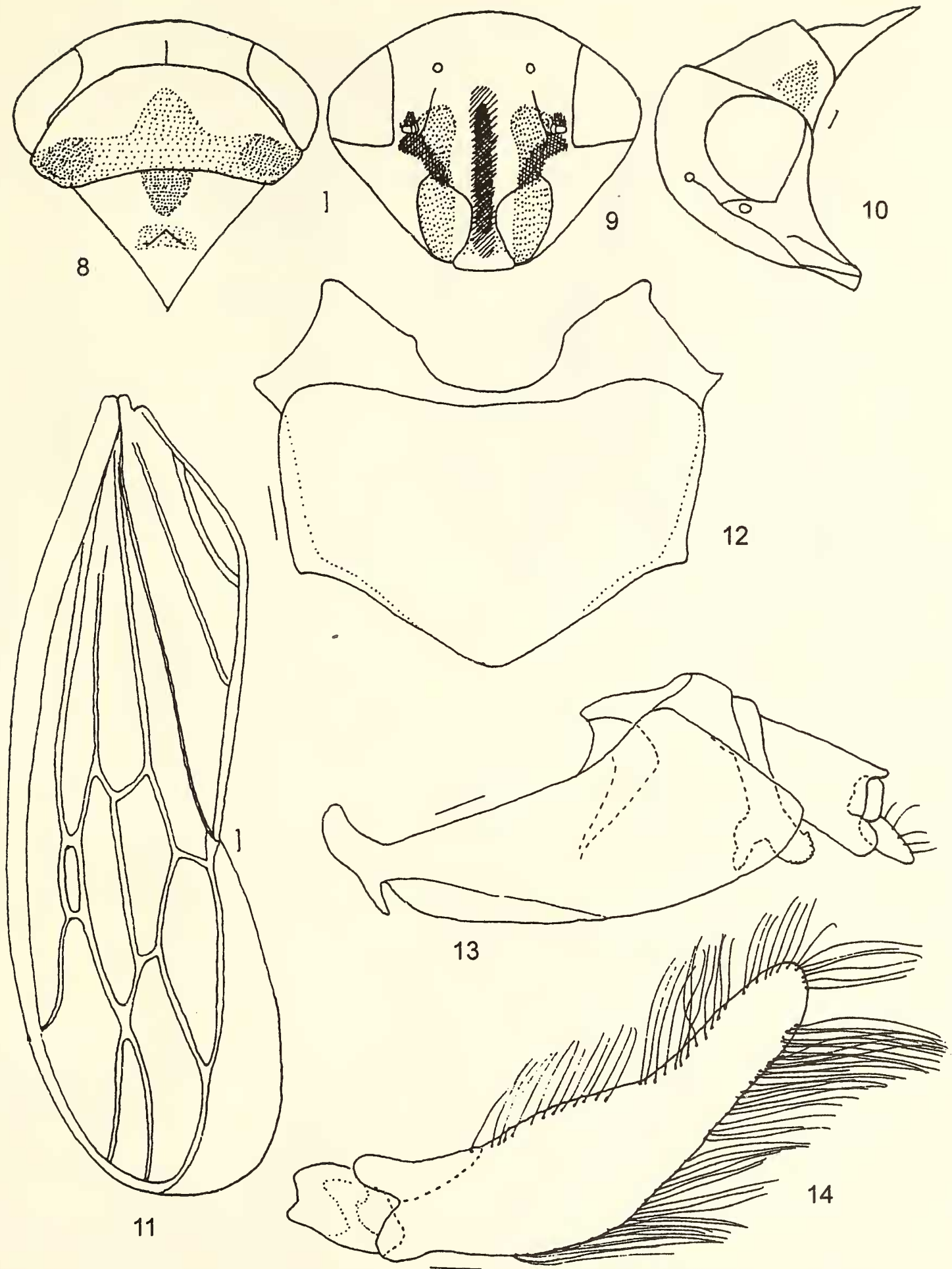
Figs 8-20

Ochraceous. A median stripe on lower half of frontoclypeus running entire length of clypellus, a lateral stripe on either side of this running on lateral margin of lower half of

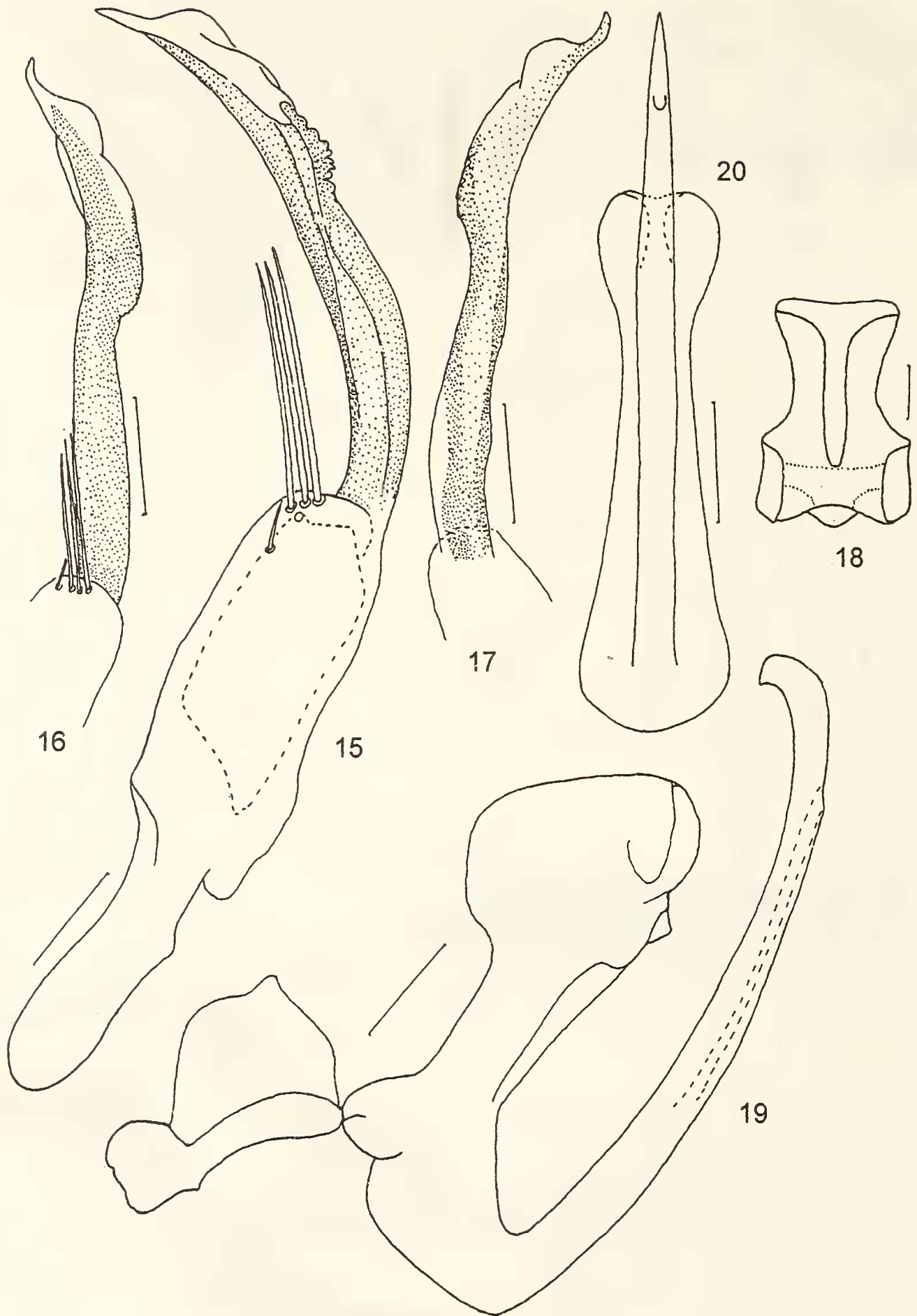


Figs 1-7: *Periacerus lalithae* (Viraktamath), 1. Face, 2. Female ovipositor, 3. Gonocoxa I, 4. Gonocoxa II, 5. Base of gonapophysis I and gonocoxae, 6. Gonapophysis I, 7. Gonapophysis II
(Scale line indicates 0.1 mm)

NEW DESCRIPTIONS

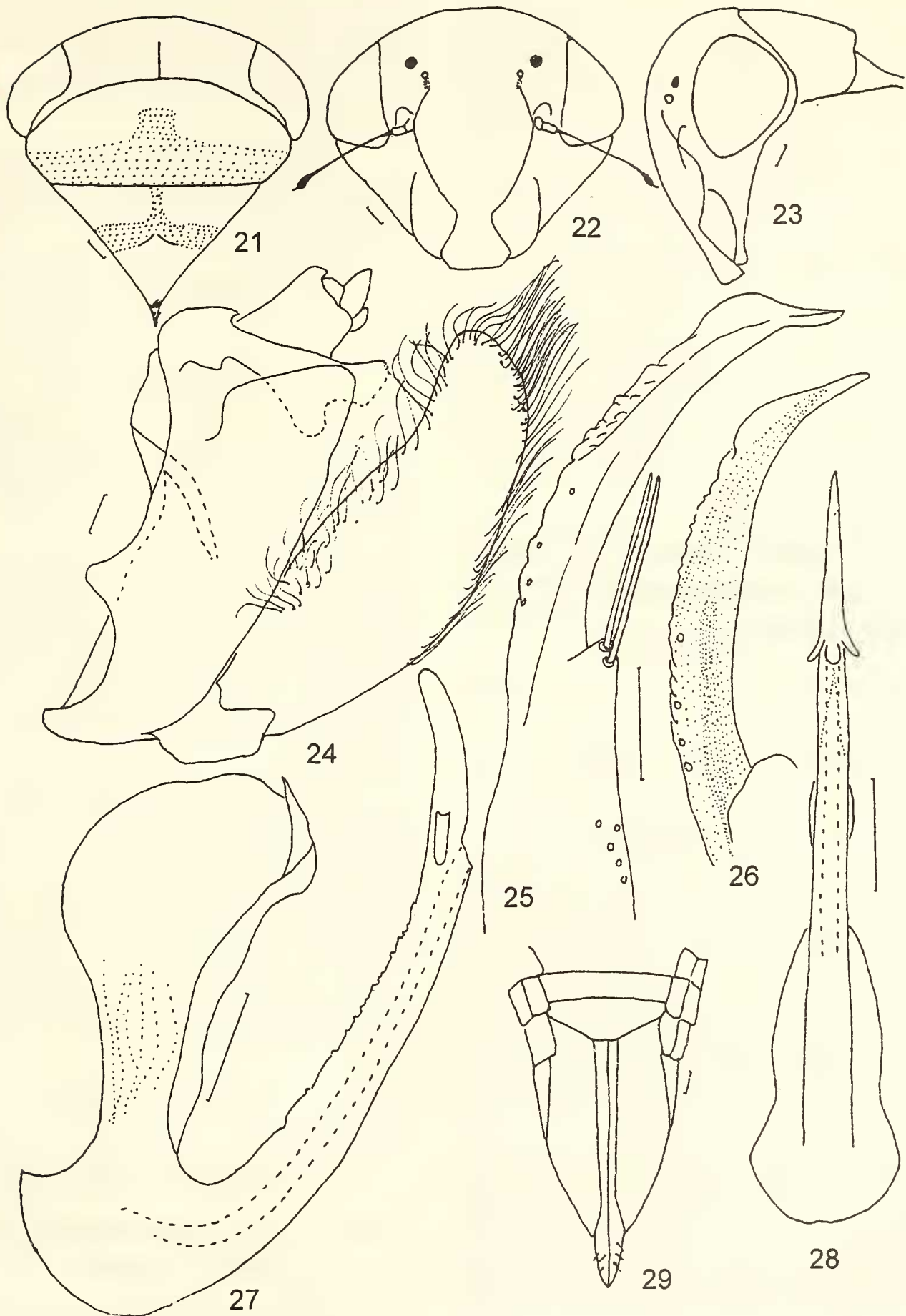


Figs 8-14: *Periacerus lankensis* sp. nov., 8. Head and thorax, 9. Face, 10. Head and thorax, profile, 11. Fore wing, 12. Male eighth sternum, 13. Male genital capsule, 14. Subgenital plate (Scale line indicates 0.1 mm)



Figs 15-20: *Periacerus lankensis* sp. nov., 15. Style, 16, 17. Different aspects of apophysis of style, 18. Connective, 19. Connective and aedeagus, lateral view, 20. Aedeagus, ventral view
(Scale line indicates 0.1 mm)

NEW DESCRIPTIONS



Figs 21-29: *Periacerus bidentatus* sp. nov., 21. Head and thorax, 22. Face, 23. Head and thorax, profile, 24. Male genital capsule, 25. Apical half of left style, 26. Same right style, 27. Aedeagus, lateral view, 28. Same, ventral view, 29. Female genitalia (Scale line indicates 0.1 mm)

frontoclypeus, extending on to lorum dark brown. Transverse band on posterior margin of pronotum brownish, lateral areas of band darker. A central large spot on anterior half of scutellum brownish. Fore wing with apical half of clavus mesad of outer claval suture greenish-yellow; venation dark brown. Fore and mid tarsi, apical 0.33 of fore and mid tibiae dark brown to piceous.

Male genitalia: Pygophore gradually increasing in depth caudally, with strong apodemes on anterior margin both dorsally and ventrally. Anal collar process bifid caudally. Style as in Fig. 14. Connective broad basally, 1.5 times as long as wide at base. Aedeagal shaft slender, compressed, apex slightly hooked.

Female: Unknown.

Measurements: Male 4.90-5.50 mm long and 1.60-1.70 mm wide across eyes.

Material examined: SRI LANKA: Holotype ♂, "Hakgala, Ceylon, v.1911" (BMNH).

Paratypes: 2 ♂, data as for holotype (BMNH).

Remarks: See under *P. lalithae*.

Periacerus bidentatus sp. nov.

Figs 21-29

Ochraceous. A broad area on vertex, continued on face to ocelli, posterior marginal band to pronotum with a median anterior projection, two spots on scutellum and wings brownish. A latero-dorsal spot and a ventral spot to each ocellus in female and antennal disc in male piceous. Ocelli vitreous or pink. Costal margin yellowish; veins brown.

Male genitalia: Pygophore increasing in depth caudally, with anterior dorsal and ventral apodemes. Anal collar process caudally bifid, dorsal fork broader with truncate apex compared to ventral fork. Subgenital plate broadest at basal

half. Style as in Fig. 22. Aedeagal shaft not hooked apically, anterior margin serrated, with a pair of short ventrally directed lateral processes near gonopore.

Female genitalia: Hind margin of seventh sternum slightly medially produced without a median notch. Gonapophysis I and II as in *P. lalithae*.

Measurements: Male 5.80-6.00 mm long and 1.75-1.76 mm wide across eyes. Female 6.40 mm long and 1.95 mm wide across eyes.

Material examined: INDIA: Holotype ♂, "Muthikolam, 3000" [910 m], Coimbatore Dt., S. India, 23-26.ix.[19]38" and on reverse of the label "B.M.-C.M. Expdn to S. India, Sept.-Oct. 1938" (BMNH).

Paratypes: 1 ♂, data as holotype [stylopedised], 1 ♀, "Coonoor, 6,000 ft [1,820 m], S. India, 22-23. iv.[19]37" and on reverse of the label "B.M.-C.M. Expdn to S. India, April-May 1937" (BMNH). 1 ♂, INDIA: Karnataka: 19 km W of Mudigere, 6.vi.1980, C.A. Viraktamath Coll. No. 227 (UAS).

Remarks: Externally this species resembles *P. lalithae*. The type series are general except for a male from Mudigere and hence the coloration of pronotum is not very well developed. The black spots on the face are also variable in male and female. The species can readily be recognised by the short processes on the aedeagal shaft in addition to facial coloration.

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